

34. CANNIBALISM IN THE GARDEN SNAIL *MACROCHLAMYS INDICA* GODWIN-AUSTEN (STYLOMMATOPHORA: MOLLUSCA)

Macrochlamys indica, a minor agri-horticultural pest, is one of the commoner land snails occurring in India. It is found in abundance in gardens in the rainy season. As a rule, like other land snails, this species is phytophagous in habit (Raut & Ghose 1982) but an unusual feeding on the flesh of their own kind was observed.

In the evening of July 22, 1976, a cloudy day in monsoon, while studying the behaviour of *M. indica* some individuals were accidentally crushed under foot; and within a few minutes a good number of *M. indica* of different size-groups from the adjoining areas crawled towards the crushed snails, and started feeding on their flesh avidly. To ascertain their preference, portions of choice food plants namely the leaves of marigold, bean and lettuce were placed close to the crushed snails but these did not attract the snails till the last bit of flesh was consumed. Subsequent experiments were conducted in the garden and also in the laboratory to determine cannibalism in *M. indica*.

A number of crushed *M. indica* were placed on a brick. The leaves of preferred food-plants were placed around the brick. Within four minutes 38 snails moved to the spot. All of them crawled over the leaves to reach the crushed snails and started feeding on the flesh,

and they started eating plant materials only after consuming the flesh.

M. indica were supplied with fresh flesh of the land snails *Achatina fulica*, *Ariophanta interrupta* and *Rachis bengalensis* but they showed no interest. In another experiment freshly killed *M. indica* and partially decomposed ones were placed side by side. The snails always preferred fresh flesh, though the other form was not spared.

Twenty *M. indica* were released in a terrarium of 30 x 15 x 20 cm on August 10, 1977. The snails were kept active by artificial means but denied food. In the evening of August 16, 16, 4 snails were consumed by the rest of their fellows. Subsequently, 2, 4, 3, 2, 2, and 1 individuals were eaten by other snails on August 17, 18, 19, 20, 21 and 22 respectively. The remaining 2 died on August 24.

Necrophagous habit in pulmonates has been reported by a number of workers (Mitra & Biswas 1974; Moquin-Tandon 1855, Watson 1915, Hyman 1967) but cannibalism in the family Ariophantidae is not on record. Possibly cannibalism or necrophagous habit is innate in pulmonates in general, and it becomes pronounced in the scarcity of the normal plant-food and/or with the easy availability of dead or decomposed flesh, and they do not ordinarily kill their fellows.

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MISCELLANEOUS NOTES

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35. TWO NEW COMBINATIONS UNDER *ACACIA NILOTICA* (BENTH.) BRENNAN (MIMOSACEAE)

Brenan (1957) has shown that the correct nomenclature of the plant mentioned in Indian Floras as *Acacia arabica* Willd. is *Acacia nilotica* (Linn.) Del. subsp. *indica* (Benth.) Brenan. In this treatment he, however, has not said anything about the two varieties, *Acacia arabica* Willd. var. *cupressiformis* Stewart and *A. arabica* Willd. var. *vediana* Cooke dealt by Cooke in the Flora of Presidency of Bombay. A study of the living and herbarium materials clearly indicate that these two varieties are quite distinct from the plants commonly treated as the typical *A. arabica* Willd. in Indian Floras. Stewart's var. *cupressiformis* has a very peculiar arrangement of the branches giving it a remote resemblance to a *Cupressus* tree and is in this way quite distinct from the typical plants. When these plants grow side by side nobody can miss this very striking difference in appearance. We are of the opinion that this taxon deserves a varietal status under *Acacia nilotica* subsp. *indica*.

With regard to *A. arabica* Willd. var. *vediana* Cooke, Talbot (1909) in the Forest Flora of the Bombay Presidency and Sind, says "This is a distinct variety and may eventually be separated from *arabica* as a species. 'Vedi-babhul' is distinguished from 'godi-

babhul' or true *A. arabica* by its quicker growth, characteristic fissured bark and by its very different pods which are flat, shortly stalked, 2.5" x 0.15" and very little constricted between the seeds. The spines on *vedi-babhul* are also more numerous, stouter and whiter than in the type".

The collection and study of fresh materials from different localities resulted in finding more distinguishing characters in addition to those already mentioned by Talbot. The two taxa can be distinguished as follows:

Bark much fissured, pods flat and with very little constrictions between seeds, inflorescence heads up to 8 with longer peduncles, involucl below the middle of the peduncle (in blossomed heads). . . . *A. arabica* var. *vediana*

Bark less fissured, pods moniliform with deep constrictions between the seeds; inflorescence heads up to 6 with shorter peduncle, involucl above the middle of the peduncle (in blossomed heads)
 *A. arabica* (of Indian floras).

Considering the facts put forth by Talbot (1905) and the additional characters observed, we are of the opinion that var. *vediana* Cooke deserves a subspecies rank under *Acacia nilo-*